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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/773,944 | 02/01/2001 | Robert K. Jenner | 1019-US | 9154 |

25263 7590 05/14/2004

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EXAMINER

JIMENEZ, MARC QUEMUEL

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3726

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,944

Applicant(s)

JENNER, ROBERT K.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 3-10, and 14-16** are rejected under 35 U.S.C. 102(e) as being anticipated by Flanders et al. (6,625,372).

Flanders et al. teach a process for aligning an optical component **100,F** by plastic deformation (col. 13, line 25), the process comprising: finding a desired position (col. 13, lines 14-15 and 19-20, the “desired position” is the position where maximum signal is detected) of an optical axis of the optical component **100,F** relative to a rest position (col. 13, lines 21-24, the “rest position” is the position after “snap back”, it is noted that the “rest position” may not end up at the position associated with maximum coupling as described in col. 13, lines 29-33) of the optical axis of the optical component **100,F**, and exerting a deformation force that exceeds a yield force (col. 13, line 48) to plastically deform (col. 13, lines 48-49) the optical component so that the optical axis is moved in a direction of the desired position (col. 13, lines 14-15 and 19-20), wherein the rest position (col. 13, lines 21-24 and 29-33) is found after the desired position

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(col. 13, lines 14-15 and 19-20) to account for any plastic deformation induced during the step of finding the desired position (col. 13, lines 14-15 and 19-20).

Regarding claim 3, Flanders et al. teach avoiding backlash by not deforming the optical component **100,F** such that a new rest position (col. 14, lines 1-5) of the optical axis is opposed the desired position (col. 13, lines 14-15 and 19-20) with respect to a previous rest position (col. 13, lines 53-54) in a plane that is orthogonal to the optical axis.

Regarding claims 4, 7, and 16, Flanders et al. teach monitoring an active alignment signal (col. 13, lines 3-5 and 12-14) while exerting the deformation force.

Regarding claims 5, 6, 9, 10, and 15, Flanders et al. teach comparing the active alignment signal to a level of the active alignment signal when the optical component was at the desired position, and finding a new desired position relative to a new rest position, if a level of the active signal detected while exerting the deformation force is less than the level of the active alignment signal when the optical component was at the desired position by a predetermined tolerance (col. 13, lines 13-14, the maximum signal indicates the best alignment, see also steps 664,666 in fig. 20, if not at best alignment the cycle repeats until max signal is indicated).

Regarding claims 8 and 14, the optical component **100,F** includes an optical fiber **F** having an endface and a deformable mounting structure **100** that supports the optical fiber on an optical bench **10**, and wherein the step of monitoring the active alignment signal comprises: generating and coupling an optical signal (col. 13, line 14) into the optical fiber **F**, detecting a level of backreflection of the optical signal into the optical fiber **F** through the endface as the active alignment signal.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Flanders et al. in view of Applicant's Admitted Prior Art [AAPA] (page 2, lines 6-12 of applicant's specification).

Flanders et al. teach the invention cited with the exception of spectrally analyzing the optical signal for side mode suppression and using the side mode suppression as the active alignment signal.

[AAPA] teaches that it is known to determine the characteristics of light to determine the side mode suppression ratio of the system which dictates the quality of the system.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Flanders et al. with spectrally analyzing the optical signal for side mode suppression and using the side mode suppression as the active alignment signal, in light of the teachings of [AAPA], in order to determine the quality of the system. It is noted that Flanders et al. teach spectrally analyzing the signal in fig. 22.

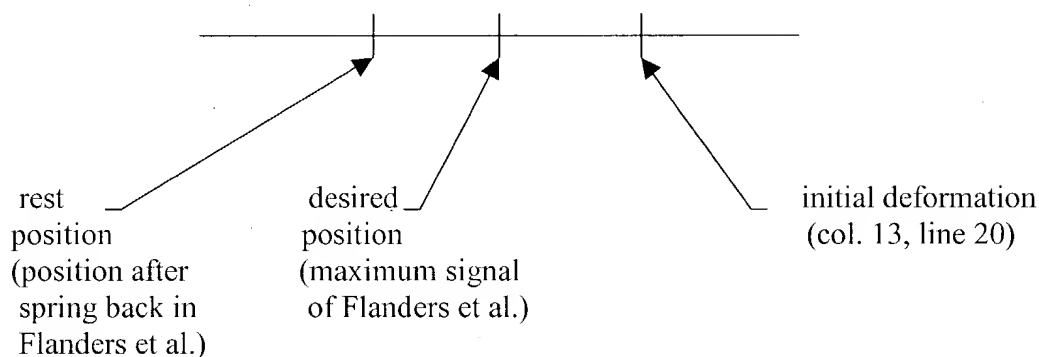
Response to Arguments

5. Applicant's arguments filed 2/20/04 have been fully considered but they are not persuasive.
6. Applicant argues that Flanders et al. do not teach "finding a desired position of an optical axis of the optical component relative to a rest position of the optical axis of the optical component". However, in col. 13, lines 14-15 and 19-20, applicant teaches that the "desired position" is the position where maximum signal is detected. The "rest position" described in col. 13, lines 21-24 is the position after "snap back". The "rest position" may not end up at the position associated with maximum coupling as described in col. 13, lines 29-33.

Flanders et al. specifically teach in col. 13, lines 14-15: "Simultaneously, the **magnitude of the signal transmitted by the fiber is monitored until a maximum signal is detected** in step 666 of Fig. 20.". The monitored maximum signal corresponds to the claimed "finding a desired position of an optical axis of the optical component" because the maximum signal is the desired position. In col. 13, lines 29-33, Flanders et al. specifically teach: "If it is subsequently determined in step 670 that the optical component, i.e., the fiber **is not at the position associated with the maximum coupling**, the deformation step 668 is performed again until the position is within an acceptable tolerance.". Therefore, after releasing and when snap-back occurs (col. 13, lines 22-24), the optical component may not be at the desired maximum signal or "desired position". Note that in col. 13, lines 24-28, Flanders et al. teach that "plastic

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deformation” is induced during the step of finding the desired position as claimed. The position after snap back is considered the “rest position”. See illustration below:



7. Applicant's arguments with respect to claims 3-5, 7-10, and 12-16 do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Interviews After Final

9. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

Contact Information

10. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer

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Service at (703) 306-5648, or fax (703) 872-9301 or by email to

CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**.

The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

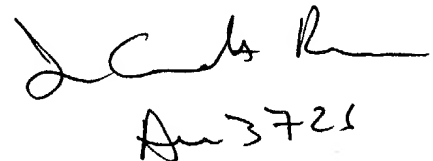
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MJ
May 3, 2004



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